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United States
Environmental Protection
Agency

Office of Public Affairs
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Illinois Indiana
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U.S. EPA Announces Final Cleanup Criteria for Kerr-McGee Residential Areas Superfund Site

West Chicago, Illinois

November 1993

Introduction

U.S. EPA, in consultation with Illinois Department of Nuclear Safety (IDNS), has finalized the cleanup criteria for identifying and cleaning up radioactive contamination at properties in the West Chicago area. The properties were contaminated when radioactive thorium mill tailings from the Kerr-McGee factory were used as fill during the 1930's through early 1950's throughout West Chicago and unincorporated DuPage County.

In March 1993, U.S. EPA held a public meeting to present the proposed cleanup criteria and asked the public to provide feedback. U.S. EPA has reviewed all comments and information it received concerning the criteria. The purpose of this fact sheet is to inform the West Chicago community of the finalized cleanup criteria and identify any changes that have been made.

Background

U.S. EPA's approach for finding and cleaning up contaminated properties consists of three phases: 1) a discovery phase, 2) a characterization phase, and 3) a verification phase during and after cleanup. (For background on the site, site history, and technical definitions, see EPA fact sheet dated March 1993 "U.S. EPA Develops Criteria. . .") The four criteria to discover and characterize contamination and to verify cleanup are outdoor soil concentrations, outdoor and indoor gamma exposure rates, and indoor radon/thoron concentrations. In addition, an approach to maintain radiation levels as low as reasonably achievable ("ALARA") will be used throughout the project.

Public Meeting --

The United States Environmental Protection Agency is holding a public meeting regarding its finalized criteria for cleaning up contaminated properties. U.S. EPA will give a short presentation and then answer questions from the public. See the back page for more details



U.S. EPA's Final Cleanup Criteria

Discovery and Characterization

The primary criterion for discovering and characterizing contamination and designating a property for response action is *outdoor soil concentration*. U.S. EPA will collect and analyze soil samples for uranium, thorium, and radium. U.S. EPA has established a criterion of 5 (five) picoCuries per gram of dry soil above background for total radium (which includes radium from both the uranium and thorium decay series). This criterion has not changed since the March 1993 proposal.

The other three criteria (outdoor and indoor gamma exposure rate, and indoor radon/thoron concentration) will be used as indicators or "finding tools" to help locate contaminated areas. Because there are sources other than thorium mill tailings that could cause elevated readings above normal background levels, **elevated readings for any of these three criteria alone generally will not trigger a cleanup action unless combined with soil sampling data which exceeds the outdoor soil concentration criterion and confirms the presence of thorium mill tailings.** This is a change from the March 1993 proposal.

The discovery and characterization criterion that will be used as a "finding tool" for both outdoor and indoor gamma exposure rate is background, which is the range of levels of naturally occurring radiation. Any readings that are statistically higher than the normal background range will be considered an indication of possible thorium mill tailings contamination. The discovery and characterization criterion that will be used as a "finding tool" for indoor radon/thoron is .02 WL or Working Levels.

Verification

After U.S. EPA identifies a property as contaminated, a "removal action" will be conducted. The verification stage is to confirm that contaminated properties have been cleaned up to levels that meet U.S. EPA's cleanup criteria.

The verification criterion to confirm that contaminated soils have been removed is 5 (five) picoCuries per gram of dry soil above background for total radium. As allowed by the regulations, U.S. EPA may combine the values of samples collected over areas of up to 100 square meters and average them to obtain a single value to compare to the criterion. This criterion has not changed since the March 1993 proposal.

During cleanup, indoor and outdoor gamma exposure rates will continue to be used as "finding tools" to help determine if additional contamination must be removed. At the end of a cleanup action at a property, the outdoor gamma exposure rate must be background, measured at 1 meter above the ground surface.

The verification criterion for indoor radon/thoron will be an annual average combined radon/thoron decay concentrations not to exceed .03 WL (Working Levels), with an objective to achieve .02 WL. This criterion has not changed since the March 1993 proposal.

In addition to meeting the verification criteria described above, the ALARA approach will be used during cleanup actions:

Every reasonable effort should be made to maintain radiation exposures, and the amount of radioactive materials in unrestricted areas, to levels that are as low as is reasonably achievable.

This is an addition to the proposed March 1993 criteria.



Next Steps

Now that the criteria have been finalized, U.S. EPA will begin the process of obtaining access from residents to begin sampling. U.S. EPA has hired a contractor (CH2M Hill) to do the discovery and characterization work, and will continue to work closely with IDNS. Some of the indoor sampling work will begin this winter, and the bulk of the outdoor field work will begin in the Spring of 1994.

U.S. EPA also will begin negotiations with Kerr-McGee to determine whether the company will carry out the cleanup actions for properties that U.S. EPA finds to be contaminated. U.S. EPA's goal is to begin cleanups of contaminated residential properties in the Summer of 1994.

Information Repository

If you are interested in reading the document that was summarized in this fact sheet, called "Action Criteria for Superfund Removal Actions at the Kerr-McGee Residential Areas Site, West Chicago, Illinois," (dated November 1993) or any other information regarding the Kerr-McGee Superfund sites, visit the following information repository:

West Chicago Public Library
332 East Washington Street
West Chicago, Illinois
(708) 231-1552

Hours: Monday through Thursday 9:00 AM to 9:00 PM
Friday and Saturday 9:00 AM to 5:00 PM
Closed Sundays

For further information on this fact sheet, contact either of the following at the address indicated on page 1:

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Mailing List Additions

If you did not receive this fact sheet by mail, then you are not on U.S. EPA's mailing list to receive further information about the Kerr-McGee Superfund sites. If you would like to be placed on this list, please fill out this form and return it to Eileen Deamer at the address on page 1.



Name: _____

Address: _____

Telephone: _____

Affiliation: _____

INSIDE

Public Meeting

U.S. EPA is holding a public meeting regarding its finalized criteria for cleaning up contaminated properties. U.S. EPA will give a short presentation and then answer questions from the public.

Date: December 9, 1993
Time: 7:30 p.m.
Location: West Chicago Junior High School
238 E. Hazel
West Chicago, Illinois

U.S. EPA
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